

**Green Building Comprehensive Plan Policy Review Strawman  
July 7, 2011**

**INTRODUCTION**

At the time of the initial Green Building Policy adoption in December 2007, the Planning Commission was directed to review the policy after two years to assess the efficacy of the policy as well as to determine if any revisions were necessary, given that the green building field is rapidly evolving.

To begin this review, in November 2009 staff and the Planning Commission began a series of discussions to identify issues associated with the use and implementation of the policy. These issues reflected staff's experience with using the policy for two years, as well as changes to the rating systems and technological evolutions in the green building field. The issues and topics identified for discussion included:

- Existing rating systems for residential and non-residential buildings, including systems that had evolved or been introduced since the adoption of the original policy.
- Costs associated with green building.
- Policy implementation issues.
- Use of alternative rating systems (equivalent to LEED).
- Policy clarification regarding acceptable rating systems.
- Data collection and monitoring of building energy use.
- Operation and management of green buildings.
- How to best achieve green building goals through the Comprehensive Plan and zoning process.
- Greening existing buildings.

The Planning Commission and staff discussed these issues from November 2009 through June 2011. Department of Planning and Zoning (DPZ) staff researched items of interest and other County staff from the Department of Public Works and Environmental Services (DPWES) provided expertise on various issues. During this process, the Planning Commission expressed the expectation that these discussions would lead to an amendment of the current Green Building Policy Plan language. This strawman presents a preliminary version of possible draft language.

**As a disclaimer, staff wishes to stress that this document has been prepared by staff of the Planning Division of the Department of Planning and Zoning as a preliminary working document intended to spur discussion. This document should not be considered to be complete or to represent settled positions on issues. Currently this document reflects the discussions between staff and the Planning Commission; the perspective of stakeholders throughout the County has not yet been incorporated. The views of stakeholders are invited for inclusion through a series of discussions and will be incorporated into the final document.**

**Summary of Current and Draft Policy Language, as of July 7, 2011:**

**Current Policy**

- Applies to development and redevelopment.
- Encourages commitments to the U.S. Green Building Council (USGBC)'s Leadership in Energy and Environmental Design (LEED) rating system OR the equivalent.
- Encourages commitments to ENERGY STAR qualification for homes and creates an expectation for such commitments when zoning proposals seek development at the high end of the plan density range.
- Creates an expectation for green building commitments (LEED certification or equivalent) for zoning proposals for nonresidential development and for multifamily residential development of four or more stories in Tysons, Suburban Centers, Community Business Centers and Transit Station Areas when the zoning proposals seek one of the following:
  - Development in accordance with Plan options
  - Development involving a change in use from what would be allowed under existing zoning
  - Development at the Overlay Level
  - Development at the high end of the planned density/intensity range.

**Draft Policy**

The preliminary draft policy language proposes the following changes:

- Clarifying the emphasis of the policy to be on individual buildings, not site/neighborhood design.
- Adding support for reuse of and for greening/retrofitting existing buildings.
- Adding language to encourage energy and water usage data collection and performance monitoring.
- Defining “equivalent” in reference to green building rating systems.
- Adding support for higher levels of green building performance when proposed developments have exceptional intensity or density (both residential and non-residential).
- Updating the range of residential green building rating systems available for use, recognizing the more comprehensive systems now available.
- Adding Industrial Areas to the areas of the County with an expectation for a green building commitment.
- Clarifying expectations for public-private partnerships.
- Adding support for infrastructure for alternative fuel vehicles.

## **DRAFT POLICY PLAN LANGUAGE**

Staff presents for discussion language detailing revisions to the Fairfax County Comprehensive Plan, 20011 Edition, Policy Plan, Environment Section as amended through July 27, 2010, pages 19 through 21, as follows. To identify changes from the adopted Plan, changes made are shown with either an underline (new draft text) or ~~strikethrough~~ (deleted text).

### **“RESOURCE CONSERVATION AND GREEN BUILDING PRACTICES**

The energy shortage in the United States in the 1970s highlighted the finite nature of our natural resources. Since the 1970s, efforts have been pursued at the federal level to enhance energy efficiency and the efficient use of water resources. While such efforts are best addressed at the federal level, local efforts to conserve these resources should be encouraged. Recent and foreseeable events and trends have highlighted the increasing need for energy and resource conservation and efficiency, greenhouse gas reduction and green building practices. Many jurisdictions are now engaging in community energy planning and other strategies to best use available resources.

The “green building” concept provides a holistic approach to the reduction of adverse environmental impacts associated with buildings and their associated facilities and landscapes.

#### **Objective 13: Design and construct buildings and associated landscapes to use energy and water resources efficiently and to minimize short- and long-term negative impacts on the environment and building occupants.**

Policy a. In consideration of ~~Consistent with~~ other Policy Plan objectives, encourage the application of energy conservation, water conservation and other green building practices in the design and construction of new development and redevelopment projects. These practices may ~~can~~ include, but are not limited to:

- Environmentally-sensitive siting and construction of development;
- Application of low impact development practices, including minimization of impervious cover (See Policy k under Objective 2 of this section of the Policy Plan);-
- Optimization of energy performance of structures/energy-efficient design;-
- Use of renewable energy resources;-
- Use of energy efficient appliances, heating/cooling systems, lighting and/or other products;-
- Application of water conservation techniques such as water efficient landscaping and innovative wastewater technologies;-

- Reuse of existing building materials for redevelopment projects;-
- Recycling/salvage of non-hazardous construction, demolition, and land clearing debris;-
- Use of recycled and rapidly renewable building materials;-
- Use of building materials and products that originate from nearby sources;-
- Reduction of potential indoor air quality problems through measures such as increased ventilation, indoor air testing and use of low-emitting adhesives, sealants, paints/coatings, carpeting and other building materials;-
- Reuse, preservation and conservation of existing buildings, including historic structures;-
- Retrofitting of other green building practices within existing structures to be preserved, conserved and reused;-
- Energy and water usage data collection and performance monitoring;-
- Consideration of Solid waste and recycling management practices.

Encourage commitments to implementation of green building practices through certification under established green building rating systems for individual buildings (e.g., the U.S. Green Building Council's Leadership in Energy and Environmental Design for New Construction [LEED-NC®] or the U.S. Green Building Council's Leadership in Energy and Environmental Design for Core and Shell [LEED-CS®]) program or other comparable equivalent programs with third party certification. An equivalent program is one that is independent, third-party verified, and has regional or national recognition. Where developments with exceptional intensity or density are proposed (e.g. at 90 percent or more of the maximum planned density or intensity), ensure that higher levels of green building performance are attained. Encourage commitments to the attainment of the ENERGY STAR® rating where applicable. Encourage certification of new homes through an established residential green building rating system that incorporates multiple green building concepts and has a level of energy performance that is substantially equal comparable to or exceeds ENERGY STAR qualification for homes. Encourage the inclusion of professionals with green building accreditation on development teams. Encourage commitments to the provision of information to owners of buildings with green building/energy efficiency measures that identifies both the benefits of these measures and their associated maintenance needs.

Policy b. Within the Tysons Corner Urban Center, Suburban Centers, Community Business Centers, Industrial Areas and Transit Station Areas as identified on the Concept Map for Future Development, ensure that zoning proposals for nonresidential development or zoning proposals for multifamily residential development of four or more stories within the incorporate green building practices sufficient to attain certification through the LEED-NC or LEED-CS program or its an equivalent program specifically incorporating both energy efficiency and comprehensive green building

practices, where applicable, where these zoning proposals seek at least one of the following:

- Development in accordance with Comprehensive Plan Options;
- Development involving a change in use from what would be allowed as a permitted use under existing zoning;
- Development at the Overlay Level; or
- Development at the high end of planned density/intensity ranges. For nonresidential development, consider the upper 40% of the range between by-right development potential and the maximum Plan intensity to constitute the high end of the range.

- Policy c.      Ensure that zoning proposals for residential development will incorporate green building practices sufficient to attain certification under an established residential green building rating system that incorporates multiple green building concepts and that includes an ~~qualify for the ENERGY STAR Qualified Homes designation or an equivalent a comparable level of energy performance.~~ Where such zoning proposals seek development at or above the mid-the high-end range of the Plan density range, and where broader commitments to green building practices are not being applied ensure that County expectations regarding the incorporation of green building practices are exceeded in two or more of the following measurable categories: energy efficiency; water conservation; reusable and recycled building materials; pedestrian orientation and alternative transportation strategies; healthier indoor air quality; open space and habitat conservation and restoration; and greenhouse gas emission reduction. As intensity or density increases, the expectations for achievement in the area of green building practices would commensurately increase.
- Policy d.      Promote implementation of green building practices by encouraging commitments to monetary contributions in support of the county's environmental initiatives, with such contributions to be refunded upon demonstration of attainment of certification under the applicable LEED rating system or equivalent rating system.
- Policy e.      Encourage energy conservation through the provision of measures which support nonmotorized transportation, such as the provision of showers and lockers for employees and the provision of bicycle parking facilities for employment, retail and multifamily residential uses.
- Policy f.      Encourage private companies involved in public-private partnerships, wherein land is leased or provided by the County and developed by private companies, to comply with to meet or exceed County guidelines for green building certification.

Policy g. Encourage provision of charging stations and related infrastructure for electric vehicles and related infrastructure within new development and redevelopment proposals, particularly for residential where other opportunities are not available.

Policy h. Encourage recording of aggregated energy and water consumption data for a defined period of time provision of aggregated non-proprietary energy and water consumption data for a limited period of time following construction for use in monitoring and evaluating performance of green building strategies and technology.

#### **Open Questions**

- Should certain credits be emphasized more than others?
- Other issues to be raised by stakeholders

### Comprehensive List of Changes (as of July 7, 2011)

This list tracks the history and provides the reasoning or circumstances behind the proposed changes. Additions are shown in **bold**, and removed text is shown with *italics*.

- First paragraph of the policy, the sentence, “**Recent events and trends have highlighted the increasing need for energy and resource conservation and efficiency, greenhouse gas reduction and green building practices. Many jurisdictions are now engaging in community energy planning and other strategies to best use available resources**” was added to emphasize the current nature of the policy. The words “*and foreseeable*” were removed from the original sentence.
- Leadership in Energy and Environmental Design (LEED) for New Construction (LEED-NC) and for Core and Shell (LEED-CS) spelled out in the first mention in the policy, all subsequent mentions use acronyms.
- Policy a., first sentence. Remove “*consistent with*” and replace with “**in consideration of**” to be consistent with the rest of the language in the policy. Last sentence, removal of “*can*” and addition of “**may**.”
- The February draft added an additional bullet “*Adaptive reuse and preservation of existing structures, particularly historic buildings*” which was subsequently removed and replaced with two bullets, “**Reuse, preservation and conservation of existing buildings, including historic structures**” and “**Retrofitting of other green building practices within existing structures to be preserved, conserved and reused,**” to reflect the discussion concerning historic buildings and reuse of existing buildings.
- Policy a., a new bullet point, “**Energy and water usage data collection and performance monitoring**” was added to reflect the discussions concerning monitoring data concerning resource usage.
- Policy a., a new bullet point was added, “**Solid waste and recycling management practices**” to reflect the discussions concerning comprehensive consideration of green building techniques.
- Policy a., first sentence, paragraph following bullet points, the language, “**for individual buildings**” and “**-NC® or LEED-CS®**” was added to clarify the intent of the policy is to emphasize construction of green buildings rather than neighborhood design.
- Policy a., same sentence, the word, “*comparable*” was removed and replaced with “**equivalent**,” to be consistent with usage elsewhere in the policy.
- Policy a, the following sentence, “**An equivalent program is one that is independent, third-party verified, and has regional or national recognition**” was added to provide a definition for “equivalent.”
- Policy a., same paragraph, following sentence, the language, “**Where developments with exceptional intensity or density are proposed (e.g. at 90 percent or more of the maximum planned density or intensity), ensure that higher levels of green building performance are attained**” was added to reflect the interest in seeing higher levels of green building performance with

exceptional developments. The 90 percent language was added to give an example of what “exceptional” might mean.

- Policy a, same paragraph, the sentence, **“Encourage certification of new homes through an established residential green building rating system that incorporates multiple green building concepts and has a level of energy performance that is comparable to or exceeds ENERGY STAR qualification for homes”** was added to encourage residential green construction with elements beyond energy conservation, and to update the standard of energy performance. Originally, *“substantially equal”* was used in place of **“comparable”** but was removed to clarify the intent.
- Policy a. all bullet points except the last, remove periods and replace with semi-colons.
- Policy b., first sentence, **“Within the Tysons Corner Urban Center, Suburban Centers, Community Business Centers, Industrial Areas and Transit Station Areas as identified on the Concept Map for Future Development”** was added to clarify where the policy creates an expectation for green building certification. The language *“four or more stories”* was removed to clarify intent. Also, **“Industrial Areas”** was added to this list from the original policy. Other small grammatical changes were made as shown.
- Policy b., same sentence, the language **“-NC or LEED-CS”** was added to be consistent with changes noted above and the language **“program specifically incorporating both energy efficiency and comprehensive green building practices”** was added to reflect concerns that residential construction in these areas might use Energy Star rather than a more comprehensive green building rating system.
- Policy c., the language **“rating system that incorporates multiple green building concepts and that includes an”** was added to update the policy as more comprehensive residential rating systems are now widely available for use, and the language **“designation or comparable level of energy performance.”** was added to emphasize the base level of energy performance for the policy. The word *“equivalent”* was originally used and “comparable” was substituted for clarity. The language *“and where broader commitments to green building practices are not being applied”* was removed as it was determined to not be needed. The language, **“Where such zoning proposals seek development at or above the mid-range of the Plan density range, ensure that County expectations regarding the incorporation of green building practices are exceeded in two or more of the following measurable categories: energy efficiency; water conservation; reusable and recycled building materials; pedestrian orientation and alternative transportation strategies; healthier indoor air quality; open space and habitat conservation and restoration; and greenhouse gas emission reduction”** and the language *“the high end”* is removed reflects the interest in raising the expectation for green certified residential development in the County.
- Policy f. was added in its entirety, *“Encourage public-private partnerships wherein County land is leased or provided by the County and developed by private companies to comply with County guidelines for green building*



*certification*” to reflect the discrepancy between County and Comprehensive Plan policies and to provide guidance in these situations and was replaced in the current draft with, **“Encourage private companies involved in public-private partnerships where land is leased or provided by the County to meet or exceed County guidelines for green building certification.”**

- Policy g. was added in its entirety, *“Support the use of electric vehicles through the encouragement of provision of charging stations and related infrastructure within new development and redevelopment proposals”* to provide support for newly evolving land use related transportation infrastructure. In this draft the language is replaced with, **“Encourage provision of charging stations and related infrastructure for electric vehicles within new development and redevelopment proposals particularly for residential where other opportunities are not available.”**
- Policy h. was added in its entirety, **“Encourage recording of aggregated energy and water consumption data for a defined period of time following construction for use in monitoring and evaluating performance of green building strategies and technology,”** to reflect an interest in evaluating the water and energy conservation potential of green buildings. The original statement included the words, *“provision of aggregated non-proprietary energy and water consumption data for a limited period of time”* which were removed to clarify the intent.